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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,928	09/18/2001	Marshall L. Owen		8844

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EXAMINER

BHAT, NINA NMN

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/954,928	OWEN, MARSHALL L.	
	Examiner	Art Unit	
	N. Bhat	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In claims 2 and claim 6 applicant recites that the apparatus further comprises "heat scavenging means", literally the specification does not provide any basis for the term "scavenging" means. The scavenging means can be construed as a scrubber if this is what applicant intends, the scavenging means can also include materials such as desiccants or purifiers so it is unclear if the scavenging means is the scrubber or could include different separatory apparatus.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters et al. in combination with Kelmar.

Peters et al. teach the invention substantially as claimed.

Peters et al. teach an apparatus for making coal fuel comprising a return having a substantially conical shape, which includes feeding means to introduce the coal, a heating means to heat the coal and means to remove the carbonized coke. Peters et al. teach a first and second reactor, which includes first and second retorts in side-by-side arrangement. The carbonaceous material is introduced into the reactor/retort which has a plurality of temperature stages, the temperature in the first stage may be between 550-750°C the temperature in the second stage being 800°C or higher. The precooked material which is material heated to about 500°C is conveyed into the second reactor through a mixing and dispensing device where it is mixed with a heat exchange material such as sand, at 1050°C, for carrying out the second coking, after the second coking step, the coke is permitted to cool to 950°C which is then passed to a cooling chamber. [Note column 2, lines 6-75]

However, Peters does not specifically teach means for capturing hydrocarbon liquor from vapor condenses from the retort gas.

Kelmar teaches an apparatus and process to produce coke and coke by products from heating coal. The apparatus as claimed by Kelmar as shown in Figure 1 provides an apparatus and system wherein coal is crushed and screen then charged into a coke oven (2) having a combustion chamber(3). The tar, ammonia and oil from the coal is removed after cooking via a gas separation means. The apparatus and process as taught by Kelmar specific teaches how to maximize the heat recovery and useable by-products from the coking operation. The means for removing ammonia

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include using reverse osmosis equipment, scrubbers. The apparatus and process includes specific energy savings and recycling means provide a non-polluting energy efficient by product coal carbonization plant.

It would have been obvious to one having ordinary skill in the art at the time invention was made to provide a coking operation and system comprising a retort which includes means for feeding coal to the retort, control means for heating the coal, and means which provides low temperature carbonization of coal wherein the heat generated from the coking operation is utilized in other parts of the process in order conserve and take advantage of energy and temperature streams to heat/and or cool various streams. The concept of carbonizing coal in using low temperatures and staged temperatures to carbonize the coal to make coke has been specifically taught in Peters et al., Peter et al. does teach scrubbing means to scrub and re-use the hot gases resulting from the coking process. The specific details regarding capturing hydrocarbon liquour has not been taught but the hot gases are treated resulting from coking. Kelmar teaches a non-polluting by-product coal carbonization plant. Kelmar specifically teaches how one of ordinary skill in the art would take advantages of using heat from one stream of the process as either a heating or cooling stream in another stage of the process. To optimize and take advantage of energy from streams resulting from carbonizing coal which is then used in alternative streams which is used to cool or generate stream which can be used in other process such as scrubbing and cooling would have been obvious to one having ordinary skill in the art in light of the teachings of Peters and Kelmar because optimizing streams based on mass, material and heat

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balance so that the heat from one stream is used in either heating or cooling another stream, i.e., optimizing the an energy balance is well known and conventional process design and known process design strategies when designing coking and carbonizing plants thus rendering applicant's invention as a whole obvious to one having ordinary skill in the art.

5. Runge teaches a vertical retort apparatus for carbonizing coal. Smith et al. teach a from coke process. Kortin teaches a process of charging upright gas retorts. Addy et al. teach a retort for use in low temperature distillation of carbonaceous material. Haamosvsky teaches low temperature carbonizing retort. Murray teaches an apparatus and method for thermal treatment of organic carbonaceous material. Plassmann teaches a retort for carbonizing bituminous fuels. Losel teaches a method and apparatus for heating a low temperature carbonization drum. Puening'448 teach a process and apparatus for making coke.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



N. Bhat
Primary Examiner
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